

Notice of Allowability

Application No.

09/532,404

Examiner

Quang N. Nguyen

Applicant(s)

HEBEL ET AL.

Art Unit

2141

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Appeal Brief filed on 08/08/2006.
2. ☒ The allowed claim(s) is/are 7,16,20-23,27-32 and 34-36.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |


RUPAL DHARIA
SUPERVISORY PATENT EXAMINER

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this Examiner's Amendment was given in a telephone interview with the Applicant's Representative, Mr. Rick A. Toering (Reg. No. 43,195), on Oct 26th, 2006.

3. Please amend claims 7, 16, 20, 22, 23, 27, 28, 30-32 and 34-36 as below:

Claim 7. (Currently Amended) A method for communication between a plurality of clients client and a server in a computer network, each of the plurality of clients having a rotation position, comprising the steps of:

receiving, at the server, sending a first message having a priority level from the a first of the plurality of clients, client to the server, the first message having a priority level, the first message requesting processing by the server;

receiving, at the server, a second message from a second of the plurality of clients, the second message having a priority level, the second message requesting processing by the server;

~~receiving the message at the server;~~

reading the priority level of the first message at the server;

reading the priority level of the second message at the server;

determining at the server ~~a current client~~ the rotation position of the first of the plurality of clients; ~~client~~; and

determining at the server the rotation position of the second of the plurality of clients; and

processing the first message and the second message by:

processing the first message before the second message when the priority level of the first message is higher than the priority level of the second message, and

processing the first message before the second message when the first and second messages have the same priority level and the rotation position of the first client is before the rotation position of the second client.

Claim 16. (Currently Amended) A network system for processing messages, comprising:

a plurality of clients operable to generate and communicate messages having one or more priority levels to a server, each message requesting processing by the server, each of the plurality of clients having a rotation position; and

the server coupled to the clients, the server operable to receive one or more messages from the clients, to determine a priority level for each message, to determine the rotation position for each of the plurality of the clients, and to process the messages according to the messages' priority levels of the messages and the clients' rotation positions of the clients,

wherein the server is further operable to receive a first message from a first client and a second message from a second client, to process the first message before the second message if the priority level of the first message is higher than the priority level of the second message, and to process the first message before the second message if the first and second messages have the same priority level and the rotation position of the first client is before the rotation position of the second client.

Claim 20. (Currently Amended) The network system of Claim 16, wherein the server is further operable to store the messages in a queue according to the messages' priority levels of the messages, and the clients' rotation positions of the clients and to process the messages in order of storage in the queue.

Claim 22. (Currently Amended) The network system of Claim 20, wherein the server is further operable to store the messages that have a same priority level and were received from different clients in order of the different ~~clients'~~ rotation positions of the clients.

Claim 23. (Currently Amended) The network system of Claim 16, wherein the server is further operable ~~to receive a first message from a first client and a second message from a second client,~~ to store the first message before the second message in a queue if the ~~first message's~~ priority level of the first message is higher than the ~~second message's~~ priority level of the second message, to store the first message before the second message in the queue if the first and second messages have the same priority level and the ~~first client's~~ rotation position of the first client is before the ~~second client's~~ rotation position of the second client, and to process the first and second messages in order of storage in the queue.

Claim 27 (Currently Amended) A server operable to couple a first client and a second client, each of the first and second clients having a rotation position,
~~The server of Claim 24, wherein the server is further~~ comprising:

one or more computer processors operable to:

receive a first message from ~~[[a]]~~ the first client and a second message from ~~[[a]]~~ the second client, each of the first and second messages having a priority level, to

determine the priority level of the first and second messages,

determine the rotation position of the first and second clients,

process the first message before the second message if the first message's priority level **of the first message** is higher than the second message's priority level **of the second message**, and to

process the first message before the second message if the first and second messages have the same priority level and the first-client's rotation position **of the first client** is before the second-client's rotation position **of the second client**.

Claim 28. (Currently Amended) The server of Claim **27** 24, wherein the server is further operable to store the messages in a queue according to the messages' priority levels **of the messages**, and the clients' rotation positions **of the clients** and to process the messages in order of storage in the queue.

Claim 30. (Currently Amended) The server of Claim 28, wherein the server is further operable to store the messages that have a same priority level and were received from different clients in order of the different-clients' rotation positions **of the different clients**.

Claim 31. (Currently Amended) The server of Claim **27** 24, wherein the server is further operable to receive a first message from a first client and a second message

from a second client, to store the first message before the second message in a queue if the ~~first message's~~ priority level of the first message is higher than the ~~second message's~~ priority level of the second message, to store the first message before the second message in the queue if the first and second messages have the same priority level and the ~~first client's~~ rotation position of the first client is before the ~~second client's~~ rotation position of the second client, and to process the first and second messages in order of storage in the queue.

Claim 32 (Currently Amended) A method for processing messages at a server, the method comprising:

receiving a first message from a first client, the first message requesting processing by the server;

determining ~~a the first message's~~ priority level of the first message;

determining a rotation position of the first client;

receiving a second message from a second client, the second message requesting processing by the server;

determining ~~a the second message's~~ priority level of the second message;

determining a rotation position of the second client; and

processing the messages in order according to the ~~messages'~~ priority levels of the messages and the ~~clients'~~ rotation positions of the clients, wherein processing the messages in order according to the priority levels of the messages and the rotation positions of the clients further comprises:

processing the messages in order of the priority levels of the messages if the messages have different priority levels, and
processing the messages in order of the rotation positions of the clients if the messages have a same priority level.

Claim 34 (Currently Amended) The method of Claim 32, wherein processing the messages in order of the priority levels of the messages if the messages have different priority levels ~~processing the messages in order according to the messages' priority levels and the client's rotation positions further comprises[[:]] processing the first message before the second message if the first message's priority level~~ of the first message is higher than the ~~second message's priority level~~ of the second message; and

wherein processing the messages in order of the rotation positions of the clients if the messages have a same priority level further comprises processing the first message before the second message if ~~the first and second messages have a same priority level and the first client's rotation position~~ of the first client is before the ~~second client's rotation position~~ of the second client.

Claim 35 (Currently Amended) The method of Claim 32, wherein processing the messages in order according to the messages' priority levels of the messages and the ~~clients'~~ rotation positions of the clients further comprises:

storing the messages in a queue in order of the ~~messages'~~ priority levels of the messages if the messages have different priority levels;

storing the messages in the queue in order of the ~~clients'~~ rotation positions of the clients if the messages have a same priority level; and

processing the messages in order of storage in the queue.

Claim 36 (Currently Amended) The method of Claim 32, wherein processing the messages in order according to the ~~messages'~~ priority levels of the messages and the ~~clients'~~ rotation positions of the clients further comprises:

storing the first message before the second message in a queue if the ~~first message's~~ priority level of the first message is higher than the ~~second message's~~ priority level of the second message;

storing the first message before the second message in the queue if the first and second messages have a same priority level and the ~~first client's~~ rotation position of the first client is before the ~~second client's~~ rotation position of the second client; and

processing the first and second messages in order of storage in the queue.

4. Please cancel claims 8-10, 17-19, 24-26 and 33.
5. Claims 7, 16, 20-23, 27-32 and 34-36 are allowed.

6. The following is an examiner's statement of reasons for allowance:

In interpreting the claims, in light of the specification and the applicant's Appeal Brief filed on 08/08/2006, the Examiner finds the claimed invention to be patentably distinct from the prior art of records.

Li et al. (US 5,699,523) discloses a method and apparatus for communication between at least one client and at least one server, wherein the client sends to a server a request message with a seventh field of four eight-bit bytes, to indicate the degree of priority (*i.e., a client sending a message having a priority level to a server*) (**Li, Figs. 2 and col. 4, lines 4-34**).

Hluchyj et al. (US 5,231,633) discloses a queuing and dequeuing mechanism for use in an integrated fast packet network, wherein fast packets from different traffic types are received and prioritized as a function, at least in part, of a first prioritization method, and fast packets that are queued pursuant to the first prioritization method are then multiplexed with one another in accordance with a bandwidth allocation protocol, through use of a weighted round-robin bandwidth allocation mechanism (**Hluchyj, col. 4, lines 41-61, col. 6, lines 32-56 and col. 7, lines 17-59**).

Gyllstrom et al. (US 5,179,708) discloses a system and method for message delivery wherein the message is immediately delivered to destination or stored in one of a plurality of message queues based on its priority level (**Gyllstrom, Abstract, col. 4, lines 21-68 and col. 5, lines 1-27**).

However, the prior art of records fail to teach or suggest individually or in combination that a computer system and method for communication between a plurality

of clients and a server in a computer network, each client having a rotation position, comprising the steps of: receiving, at the server, a first message having a priority level from a first client and a second message having a priority level from a second client, the first and second messages requesting processing by the server; reading the priority levels of the first and second messages at the server; determining at the server the rotation positions of the first and second clients; and processing the first second messages by: processing the first message before the second message when the priority level of the first message is higher than the priority level of the second message, and processing the first message before the second message when the first and second messages have the same priority level and the rotation position of the first client is before the rotation position of the second client as set forth in independent claims 7, 16, 27 and 32. Claims 7, 16, 20-23, 27-32 and 34-36 are allowed because of the combination of other limitations and the limitations listed above.

The examiner finds the Applicant's arguments on pages 3-7 of the Argument of the Appeal Brief filed on 08/08/2006 to be persuasive. The Applicant argued in substance that the combination of prior art of records fail to disclose and/or render obvious the features of the invention including reading the priority levels of the first and second messages at the server; determining at the server the rotation positions of the first and second clients; and processing the first message before the second message when the priority level of the first message is higher than the priority level of the second message, and processing the first message before the second message when the first

and second messages have the same priority level and the rotation position of the first client is before the rotation position of the second client, as claimed in the invention to establish a priority messaging system using a priority queue where high priority messages can supersede low priority messages and to provide a rotation scheme to avoid starvation by handling equal priority messages based on their rotation positions (see Specification, section 3: Establishing the Priority Queue, pages 11-12).

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should clearly labeled "Comments on Examiner's Amendment".

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang N. Nguyen whose telephone number is (571) 272-3886.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's SPE, Rupal Dharia, can be reached at (571) 272-3880. The fax phone number for the organization is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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